

REMARKS

Claim 15 has been amended to include the limitations of canceled claim 30 and thereby represents claim 30 rewritten in independent form.

Description corresponding to new claim 36 is found in paragraph [0019] of the substitute specification.

It is respectfully submitted that the rejections for obviousness, as set forth in paragraphs 7, 8 and 9 of the most recent office action are now moot because none was applied to claim 30.

Accordingly, only the rejection of claim 30 (amended claim 15) for obviousness over Kawamura et al (paragraph 10 of the office action) remains at issue and is traversed for the reasons which follow.

An object of the present invention is to provide a radiation-sensitive resin composition (as it exists before exposure to radiation) which can be developed with neutral water. See paragraph [0012] at page 7 of applicants' specification and claims 33-35. In order to achieve the foregoing objective, the claimed invention uses an acid former and a sensitizer which are in the form of solid particles dispersed (rather than dissolved) in the water (rather than an organic solvent). The present inventors are the first to find that an acid former in the form of fine powder dispersed in water in the copresence of a sensitizer in the form of fine powder can effectively generate an acid upon being irradiated with activation ray energy. Uniquely with the present invention, excellent patterns with high resolution may be obtained even when the acid former and sensitizer are in the form of solid particles dispersed in water. See paragraph [0073] at page 30 of applicants' specification.

Kawamura neither discloses nor suggests a radiation-sensitive resin composition containing "an acid-reactive insolubilizing agent for converting the water-soluble resin into an insoluble form in the presence of said acid," quoting from claim 15. In point of fact, Kawamura requires the opposite. Radiation-sensitive compositions of Kawamura includes a binder "having a functional group which changes from hydrophobic to hydrophilic when acted upon by an acid, radiation or heat" [column 3, lines 45-53]. Stated differently, the binder of Kawamura decomposes "when acted upon by heat or acid to become water-soluble or alkali-soluble" [column 17, lines 51-54]. Summarizing, the composition claimed here is defined as containing a water-soluble resin and acid-reactive which are capable of reacting upon exposure to convert "the water-soluble resin into an insoluble form in the presence of said acid" (claim 15) whereas Kawamura discloses a composition which contains a binder that, upon exposure, is converted from a water-insoluble resin into a water-soluble or alkali-soluble substance [column 17, lines 50-60].

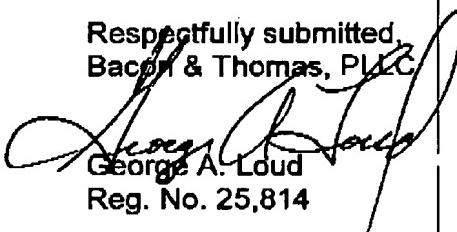
Thus, the Examiner errs where, in paragraph 8 of the office action, he writes: "Kawamura also teaches a water-insoluble solid that meets the limitation of the acid-reactive insolubilizing agent in the instant claim 15 (col. 34, line 46)." The "particulate water-insoluble solid" described by Kawamura cannot function in the manner recited by claim 15 because, as noted above, the conversion of the binder in Kawamura does in the opposite direction upon exposure. The "particulate water-insoluble solid" described by Kawamura, beginning at column 34, line 46, neither participates in any reaction nor insolubilizes a water-soluble resin in the presence of an acid. Rather, the "particulate water-insoluble solid" of Kawamura is merely a filler-like material which

"exhibits a good affinity for and adhesion to the foregoing binder and thus improves the water retention thereof" [column 34, lines 56-59] and adjusts "the physical strength and hydrophilicity of the sensitive layer' [column 34, lines 50, 51].

The Examiner also errs in paragraph 8 of the office action (incorporated by reference into paragraph 10) where he writes: "The composition also comprises a water-soluble binder (col. 17, line 50)." Again, applicants are claiming a radiation-sensitive composition. The teaching under the heading "2. Binder" at column 17, line 50 of Kawamura, referenced by the Examiner is clear to the effect that the binder in its radiation-sensitive state is water-insoluble and becomes water-soluble only after exposure to "heat or acid". Such an exposed binder is no longer radiation-sensitive. See, for example, column 5, lines 5 -27 of Kawamura.

In conclusion, it is respectfully requested that the examiner reconsider the rejections of record in light of the foregoing analysis.

Respectfully submitted,
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